SIZES OF WIRE, DRILLS OR SHEETS (Concluded).

Arranged Progressively by Diameters or Thicknesses.

Diameter or Thickness	American or B. & S.	Birmingham or Stubbs	American Screw Gage	Steel Music Wire	Metric Wire Gage Drills	Letter Drill Gage
.189					12	
.1894			10			
.191					11	
.1935					10	
.196					9	
.199					8	
.201					7	
.2026			11			
.203		6				
.204					6	
.2043	4					
.2055					5	
.209					4	
.213					3	
.2158			12			
.22		5				
.221					2	
.228					1	
.2289			13			
.2294	3					
.234						A
.238		4				B
.242						C
.2421				11		
.246						D
.2552				15		
.257						F
.2576	2					
.259		3				
.261						G
.266						H
.2684				16		
.272						I
.277						J
.281						K
.2816				17		
.284		2				
.2893	1					
.290						L
.2947				18		
.295						M
.3		1				
.302						N
.316						O
.321			20			
.323						P
.3249	0					
.332						Q
.339						R
.34		0				
.3474			22			
.348						S
.358						T
.3648	00					
.368						U
.3737			24			
.377						V
.38		00				
.386						W
.397						X
.40			26			
.404						Y
.4096	000					
.413						Z
.425		000				
.4263				28		
.4520				30		
.454		0000				
.46	0000					

These tables are prepared with reference to the diameter so as to enable any one to tell at a glance what size of drill or wire is nearest to it. Thus, if we need a hole or wire .0257 in diameter, we look down the first column and find that .0256 is the nearest, being 1-10000 small. Number 9 steel music wire is then the nearest to the desired size. This does not include the regular sizes in ⅛, 1-32, etc., as we know of these without. If we want a wire to drive in a ⅛ hole, we see that number 8 B & S gage comes nearest to it.

Compiled by Fred H. Colvin.

USEFUL FACTORS.

Quantity	×	Factor	=	Result
Inches	×	0.08333	=	feet
Inches	×	0.02778	=	yards
Inches	×	0.00001578	=	miles
Square inches	×	0.00695	=	square feet
Square inches	×	0.0007716	=	square yards
Cubic inches	×	0.00058	=	cubic feet
Cubic inches	×	0.0000214	=	cubic yards
Cubic inches	×	0.004329	=	U. S. gallons
Feet	×	0.3334	=	yards
Feet	×	0.00019	=	miles
Square feet	×	144.00	=	square inches
Square feet	×	0.1112	=	square yards
Cubic feet	×	1728.00	=	cubic inches
Cubic feet	×	0.03704	=	cubic yards
Cubic feet	×	7.48	=	U. S. gallons
Yards	×	36.000	=	inches
Yards	×	3.000	=	feet
Yards	×	0.0005681	=	miles
Square yards	×	1296.000	=	square inches
Square yards	×	9.000	=	square feet
Cubic yards	×	46656.000	=	cubic inches
Cubic yards	×	27.000	=	cubic feet
Miles	×	63360.000	=	inches
Miles	×	5280.000	=	feet
Miles	×	1760.00	=	yards
Avoir. oz.	×	0.0625	=	pounds
Avoir. oz.	×	0.00003125	=	tons
Avoir. lbs.	×	16.000	=	ounces
Avoir. lbs.	×	0.001	=	hundredweight
Avoir. lbs.	×	0.0005	=	tons
Avoir. lbs.	=	27.681		cu. inches of water at 39.2° F.
Avoir. tons	×	32000.00	=	ounces
Avoir. tons	×	2000.00	=	pounds
Watts	×	746.00	=	horse power
Horse power	×	0.00134	=	watts

Weight of round iron per foot = square of diameter in quarter inches ÷ 6.

Weight of flat iron per foot = width × thickness × 10-3.

Weight of flat plates per square foot = 5 pounds for each ⅛ inch thickness.

Contributed by W. H. Waite.

Weight of chain = diameter squared × 10.7 (approximately).

Safe load (in pounds) for chains = square of quarter inches in diameter of bar.

WATER FACTORS.

Quantity	×	Factor	=	Result
U. S. gallons	×	8.33	=	pounds
U. S. gallons	×	0.13368	=	cubic feet
U. S. gallons	×	231.00	=	cubic inches
U. S. gallons	×	0.83	=	English gallons
U. S. gallons	×	3.78	=	liters
English gallons (Imperial)	×	10	=	pounds
English gallons (Imperial)	×	0.16	=	cubic feet
English gallons (Imperial)	×	277.274	=	cubic inches
English gallons (Imperial)	×	1.2	=	U. S. gallons
English gallons (Imperial)	×	4.537	=	liters
Cubic feet (of water) (39.1°)	×	62.425	=	pounds
Cubic feet (of water) (39.1°)	×	7.48	=	U. S. gallons
Cubic feet (of water) (39.1°)	×	6.232	=	English gallons
Cubic feet (of water) (39.1°)	×	0.028	=	tons
Cubic foot of ice	×	57.2	=	pounds
Cubic inches of water (39.1°)	×	0.036024	=	pounds
Cubic inches of water (39.1°)	×	0.004329	=	U. S. gallons
Cubic inches of water (39.1°)	×	0.003607	=	English gallons
Cubic inches of water (39.1°)	×	0.576384	=	ounces
Pounds of water	×	27.72	=	cubic inches
Pounds of water	×	0.01602	=	cubic feet
Pounds of water	×	0.083	=	U. S. gallons
Pounds of water	×	0.10	=	English gallons
Tons of water	×	268.80	=	U. S. gallons
Tons of water	×	224.00	=	English gallons
Tons of water	×	35.90	=	cubic feet
Ounces of water	×	1.735	=	cubic inches

A column of water 1 inch square by 1 foot high weighs 0.434 pounds.

A column of water 1 inch square by 2.31 feet high weighs 1.000 pounds.

Water is at its greatest density at 39.2° F.

Sea water is 1.6 to 1.9 heavier than fresh.

One cubic inch of water makes approximately 1 cubic foot of steam at atmospheric pressure.

27222 cubic feet of steam at atmospheric pressure weighs 1 pound.